
Contribution ID: **343** Type: **Oral**

# Electromagnetic calorimeter reconstruction in Belle II

*Tuesday 12 March 2019 18:00 (20 minutes)*

The Belle II experiment at the SuperKEKB e+e- collider has completed its first-collisions run in 2018. The experiment is currently preparing for physics data taking in 2019. The electromagnetic calorimeter of the Belle II detector consists of 8,736 Thallium-doped CsI crystals with PIN-photodiode readout. Each crystal is equipped with waveform digitizers that allow the extraction of energy, time, and pulse-shape information. The talk will describe the offline reconstruction algorithm and first experience with the data taken in 2018. Further optimizations towards the high-rate data taking and high-dose background environment of Belle II will be discussed. Important steps in this process are improvements of existing regression algorithms for energy and position reconstruction, improvements of neutral and charged particle identification, and refinements to clustering itself using machine learning.

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**Session Classification:** Track 2: Data Analysis - Algorithms and Tools

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